

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

<b>RTIP ID#</b> <i>(required)</i> <b>RIV050535</b>				
<b>TCWG Consideration Date</b> <b>April 28, 2009</b>				
<b>Project Description</b>  The project will construct a new full access interchange on State Route 60 (SR-60) at Potrero Boulevard located approximately 1.2 miles west of the I-10/SR-60 junction within the City of Beaumont, County of Riverside. Potrero Boulevard will be a 6-lane local Urban Arterial roadway crossing over State Route 60 with a bridge structure and traffic signals at the ramp termini's. Eastbound and westbound ramp systems will be constructed and will include HOV lanes and ramp metering infrastructure, approach auxiliary lanes for 2-lane exits, grading, drainage, retaining walls, signing and pavement delineations. The purpose of the project is to improve safety and freeway operations along State Route 60 and Interstate 10 by upgrading the State Route to Freeway standards; reduce accidents and facilitate safer movements by eliminating at-grade intersections to State Route 60; and improve local and regional traffic circulation north and south of State Route 60 to accommodate public access to existing and future businesses and developments.				
<b>Type of Project</b> New Interchange				
<b>County</b> Riverside	Narrative Location/Route & Postmiles  Project improvements will begin on State Route 60 at PM 28.22 and end at PM 30.23. Potrero Boulevard, a 6-lane arterial roadway will cross State Route 60 at PM 28.95. Improvements will occur along State Route 60 between Jack Rabbit Trail Road and the I-10 / SR-60 Junction.  <b>Caltrans Project – EA# 341400</b>			
<b>Lead Agency:</b> California State Department of Transportation (Caltrans)				
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<b>Hot Spot Pollutant of Concern</b> <i>(check one or both)</i> <b>PM2.5 X</b> <b>PM10 X</b>				
<b>Federal Action for which Project-Level PM Conformity is Needed</b> <i>(check appropriate box)</i>				
Categorical Exclusion (NEPA)	X    EA or Draft EIS	FONSI or Final EIS	PS&E or Constructi on	Other
<b>Scheduled Date of Federal Action:</b>				
<b>NEPA Delegation – Project Type</b> <i>(check appropriate box)</i>				
Exempt	Section 6004 –Categorical Exemption	X    Section 6005 – Non-Categorical Exemption		
<b>Current Programming Dates</b> <i>(as appropriate)</i>				
	<b>PE/Environmental</b>	<b>ENG</b>	<b>ROW</b>	<b>CON</b>
<b>Start</b>	2006	2009	2009	2010
<b>End</b>	2010	2010	2010	2012

**Project Purpose and Need (Summary):** *(attach additional sheets as necessary)*

**A. Purpose of the Project**

The purpose of the proposed project is to:

- 1) Improve safety and freeway operations along State Route 60 by upgrading the State Route to freeway standards;
- 2) Reduce accidents and facilitate safer movements by eliminating at-grade intersections to State Route 60; and
- 3) Improve local and regional traffic circulation north and south of State Route 60 to accommodate existing businesses and residences and improve emergency response times.

**B. Need for the Project**

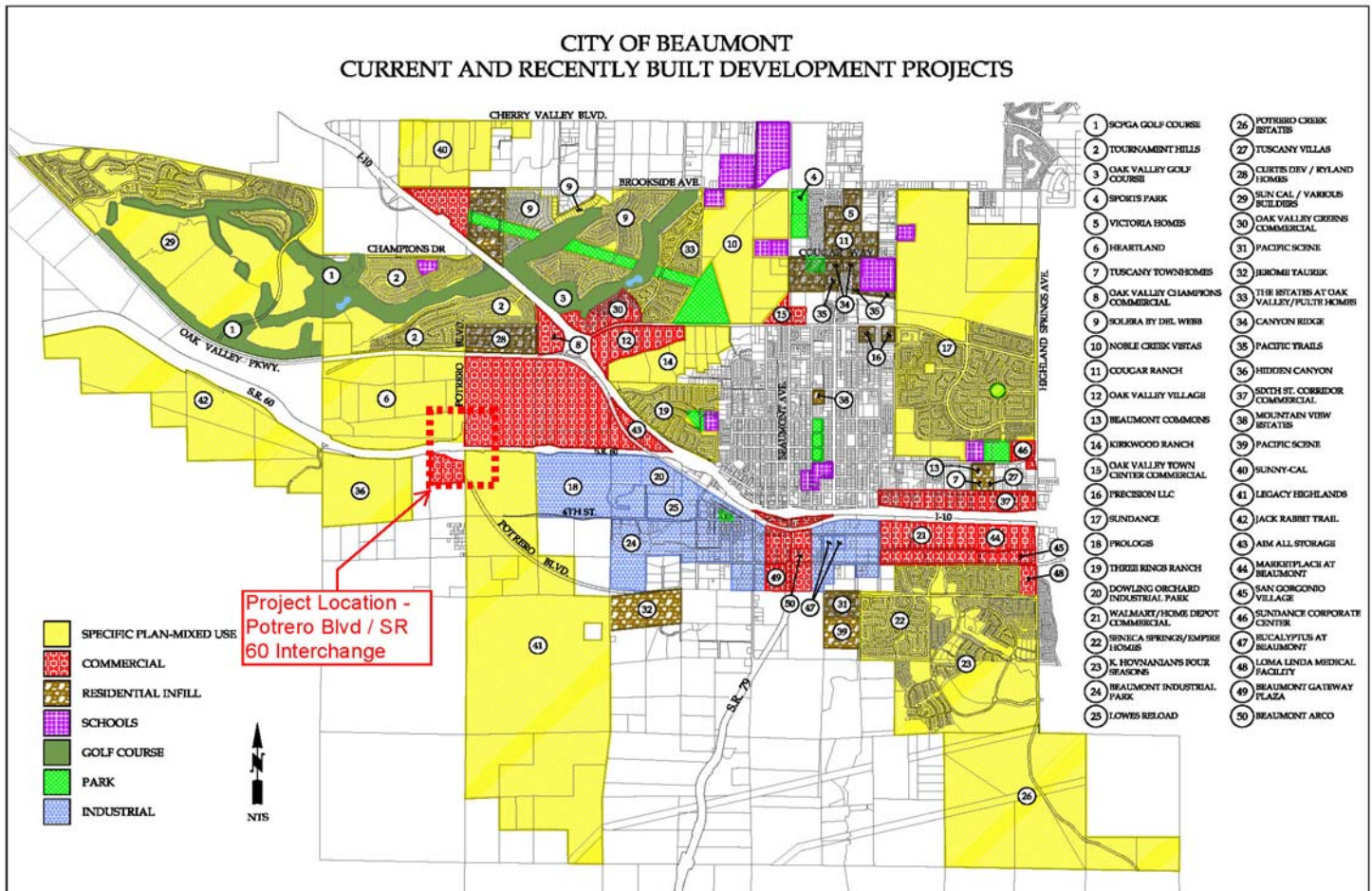
Currently, the portion of State Route 60 between Jack Rabbit Trail and the I-10/SR-60 Junction within the project limits is a 4-lane divided highway with at-grade intersections and other points of access located north and south of the freeway. These access points allow ingress and egress to the existing freeway under freeway speeds which has created safety and operational issues over the years. The proposed project will upgrade State Route 60 to a freeway standard by eliminating these access points, constructing a concrete median barrier, and providing access to existing businesses and residences along Western Knolls Avenue by extending this frontage road to the proposed interchange overcrossing roadway, Potrero Boulevard.

Since 2003, more than 130 collisions have been reported within the limits of the proposed project along State Route 60 that resulted in three (3) fatalities and fifty-one (51) injuries. Many of these accidents will be eliminated or reduced once the at-grade intersections are eliminated as part of the proposed project.

The City's General Plan Circulation Element and regional transportation agency planning documents call for the construction of the proposed project and pertinent local roadways that will serve the western area of the City. Once completed, local traffic will have better access to businesses and residences north and south of State Route 60. This benefits the regional traffic movements in the area since local traffic would not use the freeways as much. Another benefit of the proposed project would be providing another access from the freeway to the businesses and residences by emergency vehicles. The proposed project would reduce response times to less than five (5) minutes.

### Surrounding Land Use/Traffic Generators (especially effect on diesel traffic)

**LAND USES** - The interchange is proposed to be constructed approximately 8,000 feet west of the I-10 Freeway. Existing land surrounding the proposed interchange are relatively undeveloped at this time. A large residential land development (Heartland) is currently under construction north and northwest of the proposed interchange. The area adjacent to the proposed interchange are zoned as single family residential to the northwest, commercial and industrial to the south and southwest, and is governed by a Urban Village Overlay to the northeast. The Urban Village Overlay is a specific plan that will include a regional commercial center, high density residential developments and recreational amenities. The graphic below depicts the land uses the City of Beaumont is planning for.



**TRAFFIC GENERATORS** - The study area currently has relatively high percentages of truck traffic because the I-10 Freeway serves as a primary viaduct for interstate commerce. The existing truck percentage along the freeway mainline facilities is approximately 13%. The truck traffic percentage for near-term 2015 conditions is expected to be similar to existing conditions. **For 2035 traffic conditions, truck percentages are anticipated to decrease because the study area is being developed into a suburban community comprised of mostly residential neighborhoods.** The 2035 traffic forecast is based on the Pass Area Model (PAM), which is a focused version of the Riverside County Integrated Projects (RCIP) traffic model. The PAM and RCIP models do not have a separate truck model, and count one truck as one vehicle. However, the PAM and RCIP models do make a general assumption that the truck traffic on the freeways and state routes is 12% while the truck traffic on local arterials is 5%. The traffic model assumptions were made based on the "Quick Response Freight Manual", and Appendix 3.5 of the traffic study contains the traffic model coding subroutine. A Passenger Car Equivalence (PCE) factor of 2.0 has been used to account for heavy vehicles. Therefore, the following truck percentage values are assumed at the following locations for 2035 conditions:

- I-10 Freeway, SR-60 Freeway, SR-79: **12%**
- Local Arterials and Intersections: **5%**

**Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**

The proposed SR-60/Potrero Interchange will improve circulation in the study area by providing an alternate freeway access for the study area, completes the connectivity of local arterial networks in the City of Beaumont General Plan as well as the connectivity of development areas that are separated by the freeways, and alleviate traffic congestion at other adjacent interchange locations.

Table 1 below shows the near-term 2015 level of service and average daily traffic (ADT) volumes on the freeway segments in the study area. The truck traffic on the freeway is approximately 13% of the total 2015 volume.

**TABLE 1**  
**Near-Term 2015 Freeway Level of Service and Average Daily Traffic**

Freeway	Mainline Segment	Near-Term 2015 No Build				Near-Term 2015 Build Alternative 1				Near-Term 2015 Build Alternative 2			
		Level of Service <sup>1</sup>		Average Daily Traffic (ADT)		Level of Service		Average Daily Traffic (ADT)		Level of Service		Average Daily Traffic (ADT)	
		A M	P M	Total	Trucks	A M	P M	Total	Trucks	A M	P M	Total	Trucks
Interstate 10	West of Oak Valley Off-Ramp	C	D	119,900	15,600	C	D	119,900	15,600	C	D	119,900	15,600
	West of SR-60 Interchange	C	D	122,900	16,000	B	B	112,400	14,600	B	B	112,400	14,600
	East of SR-60 Interchange	C	D	166,100	21,600	B	C	164,100	21,300	B	C	164,100	21,300
	East of SR-79 Interchange	C	D	164,800	21,400	B	C	164,800	21,400	B	C	164,800	21,400
State Route 60	West of Potrero Off-Ramp	C	D	67,800	8,800	C	D	67,800	8,800	C	D	67,800	8,800
	East of Potrero Off-Ramp	C	D	67,800	8,800	B	B	63,600	8,300	B	B	63,600	8,300

As shown on Table 1 above, the near-term 2015 analysis shows that the proposed SR-60/Potrero Interchange will improve levels of service and decreases the traffic volumes on some of the freeway segments.

**RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**

Table 2 below shows the long-range 2035 level of service and average daily traffic (ADT) volumes on the freeway segments in the study area. The truck traffic on the freeway is approximately 12% of the total 2035 volume.

**TABLE 2**  
**Long-Range 2035 Freeway Level of Service and Average Daily Traffic**

Freeway	Mainline Segment	Long-Range 2035 Without Potrero Interchange				Long-Range 2035 With Potrero Alternative 1				Long-Range 2035 With Potrero Alternative 2			
		Level of Service		Average Daily Traffic (ADT)		Level of Service		Average Daily Traffic (ADT)		Level of Service		Average Daily Traffic (ADT)	
		A M	P M	Total	Trucks	A M	P M	Total	Trucks	A M	P M	Total	Trucks
Interstate 10	West of Oak Valley Off-Ramp	F	F	179,700	21,600	F	F	179,700	21,600	F	F	179,700	21,600
	West of SR-60 Interchange	F	F	209,900	25,200	C	C	159,900	19,200	C	C	159,900	19,200
	East of SR-60 Interchange	E	F	246,800	29,600	D	E	246,800	29,600	D	E	246,800	29,600
	East of SR-79 Interchange	D	E	246,800	29,600	C	E	246,800	29,600	C	E	246,800	29,600
State Route 60	West of Potrero Off-Ramp	E	F	139,300	16,700	E	F	118,400	14,200	E	F	118,400	14,200
	East of Potrero Off-Ramp	E	F	139,300	16,700	C	C	105,000	12,600	C	C	105,000	12,600

As shown on Table 2 above, the long-range 2035 analysis shows that the proposed SR-60/Potrero Interchange will improve levels of service and decreases the traffic volumes on some of the freeway segments.

**Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT**

The proposed SR-60/Potrero Interchange will attract traffic onto Potrero Boulevard while providing traffic congestion relief to the I-10/Oak Valley Interchange, the I-10/Beaumont Interchange and the I-10/SR-60 Junction.

As shown on Table 3 below, the 2015 traffic increases on Potrero Boulevard are listed as below, with the addition of the proposed SR-60/Potrero Interchange:

- 2015 Traffic Increase North of the SR-60 Freeway: 14,500 ADT
- 2015 Traffic Increase South of the SR-60 Freeway: 6,500 ADT

**TABLE 3**  
**Near-Term 2015 Average Daily Traffic along Potrero Boulevard**

Potrero Boulevard Roadway Segment	Near-Term 2015 Without Potrero Interchange Average Daily Traffic (ADT)		Near-Term 2015 With Potrero Interchange Average Daily Traffic (ADT)		2015 Traffic Difference due to the Project Average Daily Traffic (ADT)	
	Total	Trucks	Total	Trucks	Total	Trucks
Between Oak Valley Parkway and "B" Street	5,900	295	20,900	1,045	+15,000	+750
Between "C" Street and "B" Street	3,400	170	17,900	895	+14,500	+725
Between SR-60 and Willow Springs Rd.	XX	XX	20,400	1,020	+20,400	+1,020
Between Willow Springs Rd. and 4 <sup>th</sup> St.	9,600	480	16,100	805	+6,500	+325
South of 4 <sup>th</sup> St.	5,200	260	6,500	325	+1,300	+65
West of Lamb Canyon Rd.	4,400	220	4,700	235	+300	+15

**RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT**

As shown on Table 4 below, the 2035 traffic increases on Potrero Boulevard are listed as below, with the addition of the proposed SR-60/Potrero Interchange:

- 2035 Traffic Increase North of the SR-60 Freeway: 46,100 ADT
- 2035 Traffic Increase South of the SR-60 Freeway: 18,000 ADT

**TABLE 4**  
**Long-Range 2035 Average Daily Traffic along Potrero Boulevard**

Potrero Boulevard Roadway Segment	Long-Range 2035 Without Potrero Interchange Average Daily Traffic (ADT)		Long-Range 2035 With Potrero Interchange Average Daily Traffic (ADT)		2035 Traffic Difference due to the Project Average Daily Traffic (ADT)	
	Total	Trucks	Total	Trucks	Total	Trucks
Between Oak Valley Parkway and "B" Street	29,400	1,470	67,500	3,375	+38,100	+1,905
Between "C" Street and "B" Street	11,800	590	57,900	2,895	+46,100	+2,305
Between SR-60 and Willow Springs Rd.	XX	XX	65,800	3,290	+65,800	+3,290
Between Willow Springs Rd. and 4 <sup>th</sup> St.	33,200	1,660	52,000	2,600	+18,800	+940
South of 4 <sup>th</sup> St.	16,200	810	20,900	1,045	+4,700	+235
West of Lamb Canyon Rd.	15,300	765	15,300	765	0	0

As indicated in Tables 3 and 4, the proposed project is expected to redistribute some traffic in the area towards the segments of Potrero Boulevard near the proposed interchange. However, that redistribution is expected to reduce traffic flow along other roadways, along the I-10, improve level of service at intersections within the project vicinity, and reduce overall vehicle miles traveled in the project area (see Table 6), **which will result in less idling and for passenger cars and trucks and overall fewer emissions.** These effects are addressed in subsequent sections of the form, and summarized in Table 5.

**Describe potential traffic redistribution effects of congestion relief** (*impact on other facilities*)

See Attachment “B” for a more detailed discussion on traffic redistribution effects of congestion relief.

Ultimately, the effect of the proposed project on regional PM emissions through traffic redistribution and congestion relief can best be assessed by considering the project’s influence on vehicle miles traveled (VMT) and associated average vehicular travel speeds. The table below estimates the influence of those factors on emissions of PM10 during the PM peak hour period along segments of freeway (SR-60 and I-10) and major roadways (eg. Potrero Boulevard). **It is during the peak commute periods, particularly during the PM period that the proportional contribution of the proposed project to congestion relief and associated emissions would be greatest.**

Relative to the predicted distribution of VMT among “other vehicles” (light-duty auto and light-duty trucks) and “trucks” (heavy-duty vehicles), the emissions reduction benefit is predicted to be disproportionately higher for “other vehicles” than “trucks” because the congestion relief will tend to be greatest for the dominant commute direction, and automobile traffic (unlike truck traffic) is expected to be distributed disproportionately in that direction.

On a daily basis, both total emissions and the project-related reductions in those emissions would be expected to be higher than what is reported here, although the percentage reduction in emissions associated with the project would be lower than the approximately 8% reduction shown in the table.

**TABLE 5**

<b>Estimated Future (Year 2035) PM Peak Hour Emissions<sup>1</sup> of PM10 from Vehicular Travel Along Roadway Segments in the Project Vicinity Based on Predicted VMT and Speeds</b>							
<b>Scenario</b>	<b>Autos<sup>2</sup></b>			<b>Trucks<sup>2</sup></b>			<b>Total PM10 Emissions for All Vehicles (pounds per PM peak hour)<sup>4</sup></b>
	<b>VMT<sup>3</sup></b>	<b>Average Speeds (mph)<sup>3</sup></b>	<b>PM10 Emissions (pounds per PM peak hour)</b>	<b>VMT<sup>3</sup></b>	<b>Average Speeds (mph)<sup>3</sup></b>	<b>PM10 Emissions (pounds per PM peak hour)</b>	
No Build	574,623	28	30.09	78,358	28	11.52	41.61
Build	550,458	29	27.61	75,062	29	10.76	38.37
<b>Difference</b>	<b>-24,165</b>	<b>+1</b>	<b>-2.48</b>	<b>-3,296</b>	<b>+1</b>	<b>-0.76</b>	<b>-3.24</b>

<sup>1</sup> Emissions estimates were derived using emission factors for the Riverside County portion of the EMFAC2007 model promulgated by the California Air Resources Board (CARB).

<sup>2</sup> The specific classes of vehicle types categorized under “Trucks” were based on the classifications used in the EMFAC2007 model. Specifically, the EMFAC model segregates light-duty autos and light-duty trucks, these two classes make up the “Autos” portion in the table above. Similarly, the light-heavy, medium-heavy, heavy-heavy, and buses are categorized as “Trucks” for purposes of this evaluation.

<sup>3</sup> VMT and corresponding average truck speed values were derived from the modeling used for the Traffic Study for this project. The links for which these predictions were obtained include all of the non-centroid-connector links in the project-specific model; that is, those links that provide an explicit geometric representation of freeway and other major roadway segments within the study area.

<sup>4</sup> Emission factors were derived from PM peak hour average speed data generated in the traffic model using EMFAC2007. A composite emission factor was developed to those vehicle classes that correspond to “Autos” and “Trucks” as discussed in footnote #2. The composite emission factors were then multiplied by the applicable predicted PM peak hour VMT value and converted to units of pounds to produce pounds per PM peak hour estimates.

**Comments/Explanation/Details**

The proposed project is intended to improve traffic flow and reduce congestion in the area. The project is a proposed new interchange and is located in an area designated nonattainment for the National Ambient Air Quality Standard (NAAQS).

For PM<sub>10</sub>, the project area is designated as unclassified/attainment with respect to the PM<sub>2.5</sub> NAAQS. **The data presented in this form suggests that the project would not be a project of air quality concern (POAQC).** Project/site conditions do not conform to any of the following standard examples of projects that would be considered POAQCs:

Under 40 CFR 93.123(b)(1)(i) and (ii):

1. A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic;

***Not applicable - the project is along an existing highway.***

2. New exit ramps or other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal;

***Not applicable - no such major freight, bus, or intermodal terminals are involved***

3. Expansion of an existing highway or other facility that affects a congested intersection (operated at Level-of-Service D, E, or F) that has a significant increase in the number of diesel trucks;

***Per Tables 1 and 2 herein, conditions at all such congested intersections are predicted to improve at least slightly under the Build conditions and in most cases results in a better LOS value. See Attachment A for more details.***

4. Similar highway projects that involve a significant number of diesel transit busses and/or diesel trucks;

***For any given analysis year, Tables 1 and 2 herein show that the average truck AADT along the nearest sections of the SR-60 and I-10 would be expected to remain virtually unchanged with the project, with a slight decrease in trucks along the I-10 freeway west of SR-60.***

***The estimated increase passenger cars and trucks along Potrero Boulevard are presented on Tables 3 and 4 herein. Although there is an increase in trucks along Potrero Boulevard, it is important to note that with the implementation of the SR-60/Potrero Boulevard Interchange, level of service at intersections within the project vicinity are expected to improve, and a reduction in overall vehicle miles traveled in the project area is expected.***

***This will result in less idling for passenger cars and trucks, and subsequently, fewer emissions and improved air quality. Table 5 herein shows the overall passenger car, heavy truck VMT, and associated PM<sub>10</sub> emissions in the study area that would be expected. A decrease under Build conditions is shown therein.***

Covered by 40 CFR 93.123(b)(1)(iii) and (iv) are:

5. A major new bus or intermodal terminal that is considered to be a "regionally significant project" under 40 CFR 93.101;

***Not applicable - the project involves no such new bus or intermodal terminal.***

6. An existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel buses increase by 50% or more, as measured by bus arrivals;

***Not applicable - the project involves no such new bus or intermodal terminal.***

***As Table 5 shows, the total PM<sub>10</sub> in the study area during the PM peak hour (worst-case conditions) would be expected to decrease substantially with the project. Given this result and given that the project/site conditions do not match any of the standard project examples of a POAQC presented above, the findings presented in this form suggest that the project is not a POAQC.***